

ADIANTHUS BUCATUS AMEGHINO, 1891 (MAMMALIA):
PROPOSED DESIGNATION OF A NEOTYPE UNDER THE
PLENARY POWERS. Z.N.(S.)2430

By Richard L. Cifelli (*Department of Mammals, National Museum of Natural History, Smithsonian Institution, Washington D.C. 20560, U.S.A.*) and Miguel F. Soria (H) (*Departamento de Paleontología (Vertebrados), Museo Argentino de Ciencias Naturales, Avenida Angel Gallardo 470, Buenos Aires 1405, Argentina*)

The concept of the genus *Adianthus* Ameghino, 1891 (*Rev. Argentina Hist. nat.* vol. 1, pp. 129–167; invalidly emended in later publications to '*Adiantus*'), type species *A. bucatatus* Ameghino, 1891, has been a matter of dispute due to confusion regarding the type specimen. Ameghino's original description of this species (op. cit.) was based on a cheek tooth which he identified as a right upper molar. The specimen was lost or mislaid, evidently during Ameghino's lifetime as he made no further reference to it and it has not been found in the Ameghino collection, now housed at the Museo Argentino de Ciencias Naturales in Buenos Aires. No comparable materials have since come to light. The description and figure of this specimen (op. cit., fig. 31) are adequate, nonetheless, and *Adianthus bucatatus* is therefore an available name. Revisory work in progress indicates that the specimen is, however, irrelevant to the entire group of ungulate mammals under consideration and belonged to a caviomorph rodent, probably a somewhat atypical dasyproctid or erethizontid. Unless a neotype is designated, new names will have to be proposed for the ADIANTHIDAE and its type-genus, *Adianthus*.

2. Ameghino later described (1894, *Bol. acad. Nac. Cien. Cordoba* vol. 13, pp. 259–452) and figured (1897, *Bol. inst. Geogr. Argentino* vol. 18, pp. 406–521, fig. 41) a hemimandible as pertaining to this species, and reference was made to this latter specimen, rather than to the type, in defining the ADIANTHIDAE (1894 op. cit.) and in placing in it other than new genera and species (1901, *Bol. acad. Nac. Cien. Córdoba*, vol. 16, pp. 349–426; 1904, *An. soc. Cien. Argentina* vol. 18, p. 56). This mandible, still in existence (Museo Argentino de Ciencias Naturales, Ameghino Collection no. 1812), was collected from a different locality and is probably but not certainly of a different geological age than the type. It unquestionably does not belong to the same species or even order as the type, but instead represents a distinct genus and species of ADIANTHIDAE as that family is currently conceived. Some subsequent workers have taken this referred specimen as the type or neotype of *Adianthus bucatatus* (Scott, 1910, *Repts. Princeton Univ.*

Exped. Patagonia vol. 7(1), pp. 1-156; Soria, 1981, *Rev. Mus. Argentino Cien. nat.* vol. 3, pp. 1-54). On the other hand, other students have used Ameghino's figure of the type as a basis for comparison when erecting new taxa pertaining to the family and assessing phylogenetic relationships of and within the group (Patterson, 1940, *Geol. ser. Field Mus. nat. Hist.* vol. 8, pp. 13-20; Simpson & Minoprio, 1949, *Am. Mus. Novitates* 1434, pp. 1-27).

3. Although the type specimen has probably been lost, the figure and descriptions of it are adequate. The referred mandible cannot be designated neotype by unilateral action as the type is probably diagnostic and specifically identifiable. It is likely that additional materials pertaining to this species will be recovered when the fauna from which it is derived is better known.

4. These confusing circumstances could be alleviated either by the designation of new generic and specific names for the mandible and designation of another genus as family type, or by designation by the Commission of the referred specimen as neotype. As the referred specimen clearly represents a distinct genus belonging to the group in question and as the ADIANTHIDAE is a name established and used in the literature for nearly 100 years (Ameghino, 1894, op. cit.; Loomis, 1914, *The Deseado Formation of Patagonia*; Simpson *et al.*, 1962, op. cit.; Soria, 1981, op. cit.; Quiroga, 1981, *Ameghiniana* vol. 18, pp. 67-71; Bond & Vucetich, 1983, *Rev. Assoc. Geol. Arg.* vol. 37 (in press)), this latter course is preferable in the interest of nomenclatural stability.

5. The Commission is therefore requested:

- (1) to use its plenary powers to set aside the type series of *Adianthus bucatus* Ameghino, 1891, and having done so to designate the hemimandible M.A.C.N. no. A1812, described and figured by Ameghino (1894, op. cit.; 1897, op. cit.) as neotype of that species;
- (2) to place the generic name *Adianthus* Ameghino, 1891 (op. cit., p. 134) (gender: masculine), type species, by monotypy, *Adianthus bucatus* Ameghino, 1891 (ibid.) on the Official List of Generic Names in Zoology;
- (3) to place the specific name *bucatus* Ameghino, 1891, as published in the binomen *Adianthus bucatus* (specific name of type species of *Adianthus* Ameghino, 1891), as interpreted by the neotype designated under the plenary powers in (1) above, on the Official List of Specific Names in Zoology;
- (4) to place the family name ADIANTHIDAE Ameghino, 1891 (type genus *Adianthus* Ameghino, 1891) on the Official List of Family Names in Zoology.